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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,248

06/20/2005

Mikio Miyake

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2899

26389 7590 03/29/2007  
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EXAMINER

KIANNI, KAVEH C

ART UNIT

PAPER NUMBER

2883

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/517,248

Applicant(s)

MIYAKE ET AL.

Examiner

Kianni C. Kaveh

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2007 and 22 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 20-43 is/are pending in the application.
- 4a) Of the above claim(s) 33-43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-32 is/are allowed.
- 6) ☒ Claim(s) 1 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Applicant's election without traverse of Group I invention is acknowledged. The examiner on 3/22/07 called Mr. Nagae and explained that the Examiner mistakenly included claim 33 in group I and that thus with Mr. Nagae's authorization the Examiner proceeded to examine Group I invention claims 1 and 20-32. Thus, the requirement is still deemed proper and is therefore made FINAL.

#### ***Allowable Subject Matter***

Claims 26-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 26 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a base section of the end having the male convex shape is continued to an end edge of an annular step which is formed to have a diameter reduced in a radial direction of the ferrule, and a base section of the end having the female concave shape is continued to an end edge of an annular step which is formed to have a diameter reduced in a radial direction at an open end of the ferrule in combination with the rest of the limitations of the base claim. Claims 27-32 are allowed in virtue of dependency.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 6358874).

Kobayashi teaches a pair of ferrules used for an optical fiber connector (shown in at least fig. 10, items 1) ,  
the pair of ferrules 1 comprising: a first ferrule which has an optical fiber-inserting hole (see col. 5, 4<sup>th</sup> parag.); and a second ferrule which has an optical fiber-inserting hole and which is arranged opposingly to the first ferrule so that the optical fiber-inserting hole of the second ferrule is positioned coaxially with respect to the optical fiber-inserting hole of the first ferrule (shown in at least fig. 10),

wherein: an end of the first ferrule, which is opposed to the second ferrule, has a male convex shape, and an end of the second ferrule, which is opposed to the first ferrule, has a female concave shape provided with a fitting section for receiving the end having the male convex shape while making tight contact therewith (see fig. 7, specifically lines 51-60 or 34-60).

However, Kobayashi does not specifically state that the above male and female shaped ferrules are male and female and that wherein each of the convex/concave shape has one of a conical/spheroidal/hemispherical shape angle of depression of 20.degree. to 80.degree and that the material of the ferrule is nickel alloy. Nevertheless, Kobayashi states that the material can be metallic (see col. 1, 3<sup>rd</sup> parag.). It is obvious/well-known to those of ordinary skill in the art when the invention was made that matching shapes as concave vs. convex would have one of the shapes of conical/spheroidal/hemispherical shapes as male/female in any range and it would have been obvious thereof to have the depression in a given range such as 20 degree to 80 degree and that the metallic ferrule as matter of design choice be nickel and/or steel alloy since such shape provide longer duration without reducing in thermal and mechanical property in high temperature and humidity circumstances (see col. 1); wherein each of the first and second ferrules is made of metal (see col. 1, 3<sup>rd</sup> parag.); wherein each of the first and second ferrules is made of stainless steel; wherein each of the first and second ferrules is produced by an electroforming method (not given patentable weight for process used to obtain the ferrule);

***Citation of Relevant Prior Art***

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

(US-20060013537 or US-20050036742 or US-20010036342 ) or (US-6358874 or US-4139260 or US-4767177 or US-5590229 or US-4090778 or US-5133032 or US-4787700 ) or (EP-448162 )

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/22/07



K. CYRUS KIANNI  
PRIMARY PATENT EXAMINER